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ABSTRACT OF THE DISCLOSURE

A semiconductor device fabrication method is disclosed to reliably separate diced semiconductor chips from a dicing tape without damaging the diced semiconductor chip. The method includes the steps of: attaching a wafer on a dicing tape; dicing the wafer, thereby forming divided semiconductor chips; and separating the semiconductor chips from the dicing tape, wherein the step of separating includes the steps of: providing a hollow sheet having at least one aperture corresponding to the semiconductor chips between the semiconductor chips attached on the dicing tape and a porous plate coupled to a vacuum source; sucking the semiconductor chips to the porous plate via the hollow sheet by driving the vacuum source; and separating the dicing tape from the semiconductor chips under a condition where the semiconductor chips are being sucked to the porous plate.

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